

## PATENT IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Applic	ation of:	)
	Hoppensteadt et al.	) )
		) Group Art Unit: 2121
Serial No.:	09/831,812	)
	·	) Examiner: Holmes, Michael B.
Filed:	July 30, 2001	)
	•	)
For:	Oscillatory Neurocomp	ers with Dynamic Connectivity
	INFORMATIO	DISCLOSURE STATEMENT RECEIVED
Commission	er for Patents	AUG 0 4 2004 Technology Center 2100
PO Box 1450		Technology Cents.

Dear Sir:

**Alexandria, VA 22313-1450** 

Pursuant to 37 C.F.R. Section 1.97 - 1.99, the Applicant wishes to make the following references of record in the above-identified application. This Information Disclosure Statement is in compliance with the continuing duty of candor as set forth in 37 C.F.R. Section 1.56. These references are also listed on the enclosed PTO Form 1449 and copies are enclosed.

In the judgment of the undersigned, portions of the listed references may be material to the Examiner's consideration of the presently pending claims. However, the references have not been reviewed in sufficient detail to make any other representation and, in particular, no representation is intended as to the relative relevance between references, whether cited in this or prior statements. This statement is not a representation that the listed references have effective dates early enough to be "prior art" within the meaning of 35 U.S.C. Section 102 or Section 103.

This Information Disclosure Statement is being filed:

within three months of the filing date of a national application; within three months of the
 date of entry into the national stage as set forth in 37 C.F.R. § 1.491 in an international
application; or before the mailing date of a first Office Action on the merits. 37 C.F.R.
§1.97 (b)

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PTO/SB/08A (08-03)
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## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Substitute for form 1449/PTO

Sheet 1

(Use as many sheets as necessary)

Complete if Known			
Application Number	09/831,812		
Filing Date	July 30, 2001		
First Named Inventor	Hoppensteadt et al.		
Art Unit	2121		
Examiner Name	Holmes, Michael B.		
Attorney Docket Number	9138-0018US		

	U. S. PATENT DOCUMENTS				
Examiner Initials*	Cite No. <sup>1</sup>	Document Number  Number-Kind Code <sup>2 (f known)</sup>	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	<sup>US-</sup> 4,660,166	04/21/1987	Hopfield	
	2	<sup>US-</sup> 4,815,475	03/28/1089	Burger	
	3	<sup>US-</sup> 4,926,064	05/15/1990	Tapang	
	4	<sup>US-</sup> 5,072,130	12/10/1991	Dobson	RECEIVED
	5	<sup>US-</sup> 5,263,122	11/16/1993	Nunally	•
	6	<sup>US-</sup> 5,479,577	12/26/1995	Yang	AUG 0 4 2004
	7	<sup>US-</sup> 5,705,956	01/06/1998	Neely	
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FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No.1	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages	
		Country Code <sup>3 -</sup> Number <sup>4 -</sup> Kind Code <sup>5</sup> (if known)	MM-DD-YYYY		Or Relevant Figures Appear	T
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This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number. Complete if Known Substitute for form 1449/PTO **Application Number** 09/831,812 **Filing Date** INFORMATION DISCLOSURE July 30, 2001 STATEMENT BY APPLICANT **First Named Inventor** Hoppensteadt et al. Art Unit 2121 (Use as many sheets as necessary) Technology Center 2100 **Examiner Name** Holmes, Michael B. Attorney Docket Number Sheet 2 9138-0018US of

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	8	Hopfield, J. J., "Neural networks and physical systems with emergent collective computational abilities" Proc. Natl. Acad. Sci. USA, Vol.79, pp. 2554-2558, April 1982.	
	9	Hoppensteadt, F. C., Izhikevich, E. M., "Oscillatory Neurocomputers with Dynamic Connectivity" Physical Review Letters, Vol. 81, No. 14, April 5, 1999.	
	10	Linares-Barranco, B. et al., "CMOS Analog Neural Network Systems Based On Oscillatory Neurons" 1992 IEEE Intl. Symposium, Vol. 1 of 6, pp. 2236-2238.	
	11	Kurokawa, H. et al., "A Local Connected Neural Oscillator Network for Sequential Character Segmentation" 1997 IEEE Intl. Conf. on Neural Networks, pp. 838-843, June 9-12.	
	12	Buhmann, J. et al., "Sensory Segmentation by Neural Oscillators" IJCNN, Vol. 1, pp. II603-607, July 8-12, 1991.	
	13	Endo, S. et al., "Neural Network with Interacting Oscillators to Generate Low Frequency Rhythm" IEEE Intl. Conf., Vol. 12, pp. 1445-1446, Nov. 1-4, 1990.	
	14	Lange, T. E. et al., "Phase-Locking of Artificial Neural Oscillators Can Perform Dynamic Role-Binding and Inferencing" IJCNN, Vol. 1, p. II595, June 18-22, 1989.	
	15	Wang, DeLiang "An Oscillation Model of Auditory Stream Segregation" IAPR, Vol. III, pp.198-200, October 9-13, 1994.	
	16	Liu, Wei-Ping et al. "Phase-Locked Loop with Neurocontroller" SICE, pp. 1133-1138. July 20-31, 1998.	
	17	Grossberg, S. "Nonlinear Neural Networks: Principles, Mechanisms, and Architectures" Neural Networks, Vol. 1, No. 1, pp. 17-61, 1988.	

Examiner	Date
Signature	Considered

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<sup>1</sup> Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. 1 Applicant's unique citation designation number (optional). 4 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.